

CONTROL CIRCUIT WITH AUTOMATIC DC OFFSET

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ABSTRACT OF THE DISCLOSURE

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An automatic gain control circuit in the feedback path for a laser wavelength control circuit is described herein. This gain control circuit automatically adjusts the amplification of the analog signals output from a photodetector array, where the array detects a fringe pattern created by a laser beam. Another feature of the preferred embodiment feedback circuit is the automatic setting of a DC offset voltage that compensates for errors in the feedback path and enables an accurate determination of a dark level signal in the fringe pattern signal. This dark level signal provides a reference for measuring the magnitude of the fringe pattern signal. Varying photodetector outputs may now be more accurately measured. The preferred embodiment feedback circuit also employs a very fast amplifier anti-saturation circuit using LED's connected in a clamp circuit.